



Channel Islands National Marine Sanctuary Sanctuary Superintendent's Report



September 2014

A report for the Sanctuary Advisory Council

ABOUT THIS REPORT

The Sanctuary Superintendent's Report highlights recent accomplishments and activities from program areas at the Channel Islands National Marine Sanctuary (CINMS or sanctuary). This report is also available online at channelislands.noaa.gov.

Slowing Down Ships for Cleaner Air and Safer Whales - Global Shipping Companies to Participate in Vessel Speed Reduction Trial Incentive Program for Santa Barbara Channel

Channel Islands National Marine Sanctuary, the Santa Barbara County Air Pollution Control District (APCD), Environmental Defense Center, and the National Marine Sanctuary Foundation have launched a Vessel Speed Reduction (VSR) incentive trial. The VSR zone extends from Point Conception to the Ports of Los Angeles and Long Beach and traverses through the Santa Barbara Channel and sanctuary. The trial period is from July 1- Oct. 31, 2014 to coincide with the seasonal migration of endangered blue, humpback and fin whales, and the summer ozone season when atmospheric conditions are affected by air pollution. The program is modeled after the successful Vessel Speed Reduction incentive programs at the Ports of Long Beach and Los Angeles. Several marine shipping companies have enrolled, including COSCO, MOL, Matson, Maersk, United Arab Shipping Company, and K-Line. A total of 39 planned ship transits are qualified to participate in the trial. At this time, however, there is funding for 32 ship transits. The National Marine Sanctuary Foundation will manage the incentive payments (\$2,500 per transit through the Channel) with funding from the Santa Barbara Foundation and the Santa Barbara County Air Pollution Control District. Payments will be provided upon verification of the ships' speeds through the Channel, using a network of Automatic Identification System (AIS) monitors that receive data, including speed data, from ships as they transit.

ABOUT THE SANCTUARY

Designated in 1980, the Channel Islands National Marine Sanctuary consists of an area off the coast of California of approximately 1,470 square miles adjacent to the following islands and offshore rocks: San Miguel Island, Santa Rosa Island, Santa Cruz Island, Anacapa Island, Santa Barbara Island, Richardson Rock, and Castle Rock, extending seaward to a distance of approximately six nautical miles. The islands vary in distance from 12 to 40 nautical miles offshore from Santa Barbara and Ventura counties in southern California. A fertile combination of warm and cool currents in this area results in a great variety of plants and animals including kelp forests, fish, invertebrates, marine mammals and sea birds. The sanctuary also contains a wealth of maritime heritage resources including Chumash Native American artifacts and over 100 historic shipwrecks. Human uses in the area include commercial and recreational fishing, marine wildlife viewing, boating, diving, kayaking, Chumash maritime and cultural practices, maritime shipping, nearby offshore oil and gas development, research and monitoring, and numerous educational activities. Sanctuary staff coordinate research, monitoring, education, outreach, emergency response, and community involvement programs, as well as the enforcement of regulations, to promote long term resource protection and compatible human use within the sanctuary.

Incoming Vessel Operations Coordinator Libbie Mackie Arrives at Channel Islands National Marine Sanctuary (CINMS)

Elizabeth (Libby) Mackie from the NOAA Corps reported to the sanctuary for her assignment as incoming Vessel Operations Coordinator on July 28, 2014. She will be working closely with LT Lyndsey Davis, existing Vessel Operations Coordinator, and will assume the full duties of this position when LT Davis rotates out in January, 2015. Libby comes to us from her previous assignment as Junior Officer (Navigation, Safety, etc) aboard NOAA Ship *Oscar Dyson*, which primarily operates in Alaska in both the Bering Sea and the Gulf of Alaska. She is a NOAA diver and Divemaster with about 5 years of experience prior to her joining NOAA Corps in 2012. She also holds a US Coast Guard 100 ton license. Prior to her time with the NOAA Corps, Libby was enlisted in the U.S. Navy in Hawaii, and worked on dive boats. Later she attended College of the Atlantic and the Maine Maritime Academy, both in Maine, during which time she was a NOAA Hollings Scholar.

EDUCATION, OUTREACH, AND VOLUNTEERS

Tile Mosaic Connection Circle Installed at the Ocean Science Education Building

During the week of July 14th, 2014 a Connection Circle tile mosaic was installed in the entry foyer to the Ocean Science Education Building at the University of California Santa Barbara (UCSB), which is the headquarters office of Channel Islands National Marine Sanctuary and future home of the Outreach Center for Teaching Ocean Science (OCTOS). OCTOS is a joint project of the sanctuary and UCSB. The marine life and Channel Islands in the mosaic are made with hand-made glass tiles from Cuernavaca, Mexico in the tradition of ancient mosaic makers. The background mosaic is colored porcelain tile. The mosaic was fabricated on mesh and cut into 41 segments for transportation and installation. The installation process was very complex, requiring precision alignment so as to eliminate any visible joints. Five local artists submitted proposals which were evaluated based on artistic merit, educational value, past experience and references, timeline and budget. Betsy Gallery and Debora Aldo were selected by the University to create the final artwork. Betsy has created numerous fine art mosaics and twelve large public mosaic murals in the Santa Barbara area, and has worked extensively with the iCAN (Incredible Children's Art Network) in Santa Barbara creating mosaics with elementary school children. Some of the artwork in the mosaic was inspired by these interactions with students. Debora has been teaching art since 1989 to children in grades 3-12 as well as adults. She has degrees in landscape architecture and fine art.

Ventura County tourism panel discusses the role of the Channel Islands and sanctuary in marketing to local visitors at Sanctuary Advisory Council meeting

On July 18, 2014 the Channel Islands National Marine Sanctuary hosted a tourism panel with representatives from the Oxnard Convention & Visitors Bureau and the Ventura Visitors & Convention Bureau to discuss best practices to increase responsible tourism within the sanctuary. Susan Smith, CEO of the Oxnard Convention and Visitors Bureau, stated that tourism generated \$6.8 billion within the Central Coast region in 2012 alone, supporting 73,000 jobs. Susan suggested the sanctuary proactively increase marketing efforts to promote sustainable growth of the tourism industry at the Channel Islands. Steven Buenger, Executive Board Member and Vice Chair of the Oxnard Convention & Visitors Bureau, described how social media campaigns can lead to substantial increases in website visits. Michelle Gilmour, Visitor Services Manager for the Ventura Visitors & Convention Bureau, said now is the perfect time for the sanctuary to attend trade shows, and that it would be great to have tables at these shows that are staffed with sanctuary personnel and equipped with outreach materials to answer public questions.

Channel Islands National Marine Sanctuary to Host Booth at Local Air Show

On Saturday, August 23 and Sunday August 24th Channel Islands National Marine Sanctuary hosted a booth at the 2014 Wings Over Cabrillo Air Show. Over 15,000 people were in attendance at the show which had historical aircraft on display as well as aerial demonstrations. The sanctuary used this opportunity to educate the community about visiting the Channel Islands as well as for reaching out to pilots about low overflight restrictions and protection of marine life in the sanctuary.

West Coast National Marine Sanctuaries Host Successful “Get Into Your Sanctuary Day” On August 2, 2014

The West Coast Regional Office and the five west coast national marine sanctuaries (Olympic Coast, Cordell Bank, Gulf of the Farallones, Monterey Bay and Channel Islands) launched a “Get Into Your Sanctuary Day” event on Saturday, August 2nd, 2014. The event was designed to promote national marine sanctuaries as iconic travel destinations by highlighting both popular and off the beaten path adventures that each national marine sanctuary on the West Coast has to offer. During the “Get Into Your Sanctuary Day,” representatives from each West Coast national marine sanctuary partook in a day of recreation and sustainable tourism activities and shared their unique experiences and photos on their respective national marine sanctuary Facebook and Twitter accounts. Additionally, the local community, tourism vendors, and travelers contributed to the event by posting their sanctuary “connection” or experiences. Participation in the event was followed across all social media accounts through the use of #VisitSanctuaries.

Adelante Students Teleconference with a Caribbean Research Vessel at UCSB

Students from fourth, fifth and sixth grades at Adelante Charter School in Santa Barbara experienced a live two-way videoconference with scientists aboard the EV Nautilus, via a specially equipped auditorium at the UCSB Marine Science Institute on September 9th, partnering with Channel Islands National Marine Sanctuary. The EV Nautilus is an educational research vessel, directed by Dr. Robert Ballard, and currently exploring underwater volcanic Caribbean Sea seamounts in the Anegada Passage near the British Virgin Islands. Students were inspired as they entered the darkened room, illuminated by an ocean-light projector which threw underwater-light patterns on the walls. Students were able to ask direct questions of scientists aboard the Nautilus who helped them understand more about their explorations through the lenses of oceanography, geology and biology. Later on the same trip, students were able to enter the REEF center and the marine science laboratories. Sixth grade students who had previously visited the touch tanks quickly became enthusiastic docents and were able to teach fourth and fifth graders about marine life in the tanks including sea slugs, decorator crabs, sea urchins, sea stars, sea cucumbers, swell sharks, sea snails, and more. During another rotation, students were able to dissect the holdfast (or root-like fastening structure of giant kelp) in the laboratory. During the dissection, students discovered abundant forms of life, including pistol shrimp, sea urchins, brittle stars, decorator crabs, baby lobster, scallops, tube worms and more. Students were amazed at the biodiversity in these holdfasts. Students were also able to quietly tour the marine laboratories and peek in on scientists conducting experiments. You can learn more about the Nautilus and watch a live feed of their work on the website www.nautiluslive.org.

RESEARCH, MONITORING AND VESSEL OPERATIONS

Geophysical Seafloor Mapping surveys conducted off Channel Islands National Marine Sanctuary’s (CINMS) R/V *Shearwater*

After completion of emergency engine repairs on July 19, 2014, R/V *Shearwater* got underway for a 15-day U.S. Geological Survey (USGS) project. The project is collecting geophysical data along the California coast from Gaviota to Point Sal. The work is being conducted to support the large collaborative partnership of the California Seafloor Mapping Program (CSMP), and the data will be used in a USGS map publication series. The project is being funded through an interagency agreement between the sanctuary and USGS.

Successful Completion of Unmanned Aircraft System (UAS) Mission at Vandenberg Air Force Base and Santa Barbara Channel

The Center of Excellence for Unmanned Technologies at Channel Islands National Marine Sanctuary in partnership with the UAS Program Office completed a three day mission utilizing the Puma UAS to test and document the resolution of the Puma's standard payload and to evaluate the potential for utilizing the Puma as an oil spill response tool. Two days of operations were conducted from the sanctuary's R/V *Shearwater*, and one day from Vandenberg Air Force Base (VAFB). This was the first UAS operation at VAFB under a new agreement that will hopefully develop into a NOAA UAS test and calibration site. Partners included the National Marine Fisheries Service, NOAA's Office of Response and Restoration (ORR), U.S. Fish and Wildlife Service, California Fish and Wildlife, 2d3 Sensing, Ground Control and Chevron Shipping. Todd Jacobs coordinated the oil spill work including staging simulants for oil and oiled wildlife along the shore of Vandenberg Air Force Base and Flourocene dye being deployed from the R/V *Shearwater* in the Santa Barbara Channel. In addition to imaging and measuring the simulants and targets, the Puma data was processed in real time and transmitted live by 2d3 via a Ku Band satellite link provided by Ground Control from VAFB and over 4G cellular data link from the Santa Barbara Harbor. Products created and transmitted on the fly included mosaic maps. The data was ingested into Environmental Response Management Application (ERMA) by the ORR personnel participants.

Deep Sea Coral Expedition Underway in Channel Islands National Marine Sanctuary

From August 15-18, 2014, National Centers for Coastal Ocean Service (NCCOS) scientists, in partnership with Channel Islands National Marine Sanctuary, conducted benthic characterization work through ROV surveys from R/V *Shearwater* to assess vulnerability of sensitive benthic resources including *Lophelia* coral and habitat-forming sponges to ocean acidification and other possible climate change impacts. Deep-sea coral target sites at the Footprint and Piggy Bank locations were identified from surveys conducted by National Marine Fisheries Service Fisheries Ecology Division and Fisheries Resources Division in 2010 and 2011, respectively. These surveys revealed diverse communities of sponges and coral, including abundant small aggregations of the cosmopolitan reef-building coral *Lophelia pertusa*. *L. pertusa* aggregations were characterized for their extent and condition using high-resolution still photography and video imaging. The proposed surveys will revisit these sites of known occurrences to document changes in extent and condition of the coral and to collect specimens for further analyses. During the cruise, researchers will also collect water samples within close proximity of large *Lophelia* aggregations for analyses of carbonate chemistry. Following field surveys, NCCOS and sanctuary staff will work to analyze georeferenced video and still imagery to create high-quality spatial datasets of groundfish, deep sea corals, habitat-forming sponges, and physical habitat. Deep sea coral, sponge, and groundfish occurrence and abundance data will be examined for relationships to habitat variables.

Marine Applied Research and Exploration (MARE) and California Department of Fish and Wildlife (CDFW) Scientists Return to the Northern Channel Islands to Monitor Deeper Waters of Marine Protected Areas (MPAs)

From August 10-21, 2014, researchers from MARE returned to the Channel Islands to revisit ten MPA baseline sites (5 inside and 5 outside) sampled in 2003-2009 by MARE and CDFW. Data collected during the cruise will be used to determine what changes, if any, have occurred in fish and invertebrate populations after 10 years of MPA protection. Over 500 kilometers of ROV video transects (approximately 1.5 million square meters of ocean floor) have been filmed and post-processed over a seven year period spanning 2003 through 2009, both inside and outside of select MPAs at all four northern Channel Islands combined. This immense baseline data set provides the foundation from which California's first MPA network can be evaluated. MARE scientists will analyze and report findings, including any species composition and/or abundance changes inside or outside of MPAs. Video, digital stills and data from this cruise will be made available for education and outreach.

RESOURCE PROTECTION

Channel Islands National Marine Sanctuary and partners host community forum on Vessel Speed Reduction Pilot Program taking place in the Santa Barbara Channel

On September 10, 2014 Channel Islands National Marine Sanctuary, the Santa Barbara County Air Pollution Control District, and the Environmental Defense Center hosted a community forum to discuss their current Vessel Speed Reduction Trial Program that aims to slow down commercial cargo ships in the Santa Barbara Channel to reduce air pollution and increase protection of endangered whales. The forum featured guests from the Pacific Merchant Shipping Association and Maersk Line, in addition to a presentation on a recent air pollution and vessel speed reduction study by Dr. Wayne Miller from UC Riverside. Other meeting highlights included an overview of the program, updates on current whale research taking place in the Santa Barbara Channel, and a forum panel with the meeting hosts and guests that was moderated by Dr. Steve Gaines, Dean of the Bren School of Environmental Science & Management at UC Santa Barbara. The Ventura County Air Pollution Control District also announced their board approved \$30,000 in funding to join the coalition's efforts, increasing the program's total funding to \$90,000.

Vessel Assist captain discusses preventing and mitigating vessel groundings within the Channel Islands National Marine Sanctuary at Sanctuary Advisory Council meeting

At the July 18, 2014 Sanctuary Advisory Council meeting Capt. Paul Amaral, owner of Vessel Assist in Ventura, CA, discussed his private company's role to prevent and mitigate vessel groundings within the Channel Islands National Marine Sanctuary. Vessel Assist works alongside the National Park Service, U.S. Coast Guard, and local harbor patrols to assist vessels that have broken down, caught fire, grounded on rocks, or had any other type of incident between Point Dume to Point Conception, and from San Nicolas Island to San Miguel Island. He showed a series of photographs depicting situations where boats were flooded, sunken, or grounded on the shoreline, and described the methods Vessel Assist uses to safely remove and return such vessels to the mainland.

Developing a Mobile iOS Enforcement Application

Channel Islands National Marine Sanctuary, the California Department of Fish and Wildlife (CDFW), and the California Marine Sanctuary Foundation are partnering to develop and implement a mobile iOS application that would allow marine law enforcement personnel to electronically record enforcement encounters in the Santa Barbara Channel region. Grant funding from the Resources Legacy Fund will go to and through the California Marine Sanctuaries Foundation to purchase mobile devices (iPad minis), waterproof cases, hiring an app/database developer, and support training to prepare CDFW wardens for a field data collection trial. The pilot project will determine the feasibility of implementing an electronic data

collection and management system to promote more economic and efficient use of enforcement assets, encourage cooperation between enforcement agencies, and better target education and outreach efforts. Lessons learned from the pilot project may lead to scaling the project statewide.

Channel Islands National Marine Sanctuary becomes full-fledged member of the Santa Barbara Marine Mammal Stranding Network

Representatives from the National Marine Fisheries Service Stranding Network, Channel Islands National Marine Sanctuary, Santa Barbara Harbor Patrol, Santa Barbara Marine Mammal Center, and the Condor Express whale watch operator met to debrief on two recent, successful disentanglements of humpback whales. The goals of the stranding network are to reduce the entanglement rate; reduce the severity or impact of entangled marine mammals; increase awareness; verify opportunistic reports; and train experienced, authorized, and safe responses to animals in distress. Following the meeting, NMFS will put together a list of available resources in the sanctuary region to respond to entangled marine mammals, including available vessels and personnel, such as the R/V SHEARWATER and sanctuary staff.

Release of updated “Whale Alert” app for iPad and iPhone; Public invited to contribute to protection of West Coast whales

Mariners and the public on the U.S. West Coast can now use an iPad™ and iPhone™ to help decrease the risk of injury or death to whales from ship strikes. Staff from Channel Islands National Marine Sanctuary, Gulf of the Farallones National Marine Sanctuary, and the Office of National Marine Sanctuaries West Coast Region are pleased that Whale Alert, a free mobile application originally developed in 2012 to help protect endangered right whales on the East Coast, has been updated and released with new features to provide mariners with the most current information available about whale movements and conservation initiatives. The app uses GPS, Automatic Identification System, the internet, and NOAA nautical charts to provide mariners with a single source of information about whale locations and conservation measures that are active in their immediate vicinity. New features include information about California Marine Protected Areas, PORTS® (Physical Oceanographic Real-Time System) tide and weather data and the ability for the public to report whale sightings to databases that NOAA and whale biologists use to map whale habitats and migration patterns. Whale Alert data collected by citizen science and scientists are currently available online at the Whale Alert - West Coast [website](#). Whale Alert can be downloaded free of charge from Apple’s App Store, at <https://itunes.apple.com/us/app/whale-alert-reducing-ship/id911035973?ls=1&mt=8>. More information on Whale Alert and the groups responsible for its development can be found at <http://www.whalealert.org>.

Sanctuary Staff

Chris Mobley – *Superintendent*

Shauna Bingham – *Volunteer Program & Outreach Coordinator*

Julie Bursek – *Team Leader for Education and Outreach, Acting Research Coordinator*

Chris Caldwell – *Research Coordinator*

LTJG Lyndsey Davis – *Operations Officer*

Laura Francis – *Education Coordinator*

Ryan Freedman – *California Sea Grant Fellow, 2014*

Sean Hastings – *Resource Protection Coordinator*

Sean Herron – *California Sea Grant Fellow, 2014*

Todd Jacobs – *Deputy Superintendent for Administration and Operations*

Charles Lara – *Vessel Captain*

Rocío Lozano de Knowlton – *MERITO Program Coordinator*

Elizabeth Mackie – *Vessel Operations Coordinator*

Michael Murray – *Deputy Superintendent for Programs*

Robert Schwemmer – *Regional Maritime Heritage Coordinator*

Terrence Shinn – *Vessel Captain*

Morgan Tusa – *Intern*

Rebecca Young – *Program Support Specialist*

ONMS West Coast Region Staff

William Douros – *Regional Director*

Lisa Wooninck – *Policy Coordinator*

Nicole Capps – *Management Support Specialist*

Dave Lott – *Operations Coordinator*

Local ONMS Staff

Claire Fackler – *West Coast Education Liaison*

Sarah Marquis – *West Coast Media Coordinator*

Matt Pickett – *ONMS Aviation Coordinator*

Amy Cale-Huebner – *Exhibit Designer & Kiosk Developer*

Learn More About Your Sanctuary

The CINMS produces the Sanctuary Superintendent's Report in conjunction with every other bi-monthly Sanctuary Advisory Council meeting. To learn more about the sanctuary please visit our web site at: <http://channelislands.noaa.gov>.

To learn more about the Sanctuary Advisory Council please visit: <http://channelislands.noaa.gov/sac/main.html>.

Office of National Marine Sanctuaries (ONMS)

The National Marine Sanctuary System consists of 14 marine protected areas that encompass more than 163,000 square miles of marine and Great Lakes waters from Washington State to the Florida Keys, and from Lake Huron to American Samoa. The system includes 13 national marine sanctuaries and the Papahānaumokuākea Marine National Monument. The ONMS, which manages the system, was established under the National Marine Sanctuaries Act of 1972. Visit the ONMS web site at: <http://sanctuaries.noaa.gov/>.

Channel Islands National Park

To learn about Channel Islands National Park visit their web site at: <http://www.nps.gov/chis/homepage.htm>.

Get involved and stay informed!

Follow us on Twitter at www.twitter.com/NOAA_CINMS and like us on Facebook at www.facebook.com/channelislandsnms

Sign up for the CINMS listserv to receive email notices about upcoming sanctuary events, and public meetings of the Sanctuary Advisory Council and its working groups:
<http://channelislands.noaa.gov/focus/list.html>

- Contact Information -

Channel Islands National Marine Sanctuary

University of California Santa Barbara
Ocean Science Education Building 514
Santa Barbara, California. 93106
Phone: (805) 966-7107
Fax: (805) 568-1582
www.channelislands.noaa.gov